

habit, absence of hairs between the nerves of the lemma, the less prominent intermediate nerves of the lemma, and the much smaller anthers, those of *P. autumnalis* being 1.3–1.6 mm. long. From *P. reflexa*, *P. paludigena* is distinguished by the more slender, less caespitose habit, narrower leaves, shorter ligule and smaller spikelets. The anthers of the New York specimens were purple or violet when fresh; this may prove to be a constant specific character.

P. paludigena is apparently the plant described as *P. sylvestris* Gray, var. *palustris* Dudley, Cayuga Fl. 128 (1886). We have seen none of Dudley's material, but his description and the stations cited indicate *P. paludigena*, which, however, differs in many characters from *P. sylvestris*. The latter species has much broader leaves; stiffer longer panicles, with the more numerous branches strongly divergent and becoming reflexed; obtuse pubescent lemmas strongly webbed at base and with the midrib pilose to the tip and the median nerves prominent; and longer anthers (about 1.3 mm. long). The validity of the Linnean *Poa palustris* makes a new name necessary for *P. sylvestris*, var. *palustris* Dudley.

A NEW SPECIES OF BLADDERNUT.

J. FRANCIS MACBRIDE.

IN the fall of 1917, Mr. H. C. Brigham of the Walding, Kinnan & Marvin Co., wholesale druggists of Toledo, Ohio, sent to the Gray Herbarium pods and leaves from one of three bushes of *Staphylea* which were growing in his garden of native plants and which he had transplanted from the woods some years before. In his first communication, dated Oct. 1, Mr. Brigham wrote as follows: "They [the shrubs] were very small, but grew rapidly, and one of them is now about twenty feet high, while the others are more than twelve feet in height. As soon as they began to blossom and bear fruit, I noticed a strong dissimilarity between one of them and the other two. These distinctions I will set down here as briefly as may be:

"The ordinary form has a large, oblong, bright green pod, usually somewhat wrinkled. The odd form has a much smaller, pear-shaped

pod, smooth, and brightly tinted on one or two sides with pink, darkening sometimes to maroon. The latter has almost always more seeds than the former, sometimes six or seven. It is a very beautiful and showy shrub, on account of its brightly colored fruit.

"The lower leaflets of the common form are distinctly oblique at the base, and not far from sessile. Those of the odd one are not at all oblique, are darker in hue, somewhat longer, and are longer stalked. The two kinds are much more unlike in general appearance than I can well describe. The odd one is much more profuse in flowers and fruit — but this may have no bearing. Its pods are borne in dense masses."

At the suggestion of Dr. St. John (who studied the fruiting material first submitted) the matter was held in abeyance until flowers could be secured for comparison. Mr. Brigham has now sent specimens of both the typical and aberrant forms and writes as follows concerning them: "I made an examination of the flowers a day or two ago and it seems to me the structure of those of both specimens is identical except that the odd one has smaller flowers; the ordinary form, growing within a few feet of the other, came into bloom about a week ahead of it. The flowers of the common form are entirely devoid of any maroon or purplish tint. It is curious that the maroon coloring so conspicuous in the mature fruit of the odd kind should appear so strongly in the flower-buds."

Study of these fruiting and flowering specimens has failed to disclose other differences than those so carefully noted by Mr. Brigham, and although these differences are essentially vegetative in character they may be taken as indicating a distinct species, since they are apparently very constant, as shown by the following quotation from Mr. Brigham.

"I have found three good-sized shrubs of the variety, in a location several miles from that in which the first one was obtained. They were growing among other shrubs of the typical form, from which I conclude that surrounding conditions of soil, moisture and exposure do not at all account for the variation.

"In addition to the plants mentioned above, I also located, late last fall, in a woodland some miles out, a solitary *Staphylea* which showed a still more marked divergence from the type in fruit and what remained of the leaves. I have ransacked many thickets and brook-sides about Toledo to see if I could find a plant or plants which would show an intermediate stage between the two forms, but I have found none."

The petiolulate lateral leaflets, the shorter flowers and fruits and the more numerous seeds are the chief characters, then, of the new species which may very appropriately be known as

Staphylea Brighamii, spec. nov., *S. trifoliae* peraffinis; foliolis lateralibus petiolulatis basi non haud obliquis, laminis 6–8 cm. longis circa 3 cm. latis, petiolis 5–8 mm. longis; floribus brevioribus circa 6 mm. longis, sepalis purpureo-tinctis; capsula plus minusve purpureo-tincta solum circa 3 cm. longa et fere 3 cm. diametro; seminibus saepius 6–7.

Very similar to *S. trifolia* but lateral leaflets petiolulate and not at all oblique at base; blades 6–8 cm. long, about 3 cm. broad, petioles 5–8 mm. long; flowers shorter, about 6 mm. long, sepals purplish; capsule more or less tinted with purple only about 3 cm. long and nearly as thick; seeds often 6 or 7.—OHIO: near Toledo, Oct. 1, 1917, and May 6, 14, 1918, *H. C. Brigham* (TYPE, Gray Herb.).

GRAY HERBARIUM.

THE AMERICAN REPRESENTATIVES OF *EQUISETUM* *SYLVATICUM*.

M. L. FERNALD.

EUROPEAN descriptions of *Equisetum sylvaticum* and many American descriptions copied from them are nearly uniform in describing the branches as rough; thus, we find Schkuhr saying: "Rami verticillati, numerosi. . . .scabri,"¹ or Milde writing "Die Aeste. . . .rauh,"² while European figures very regularly show sections of the branches with conspicuous trichome-like spicules. These descriptions and illustrations have always been perplexing to certain American students who have been familiar with the plant of our woodlands and meadows, which is generally called *E. sylvaticum*, because in the American plant the branches are so universally glabrous or smooth. Examination of the material in the Gray Herbarium and the herbarium of the New England Botanical Club shows that there are 194 sheets of North American specimens and of these 194 sheets 188 have the branches

¹ Schkuhr, Krypt. Gewächse, 170 (1809).

² Milde, Gefäss.-Crypt. in Schles. 432 (1858).